

**CLAIMS**

1. Upon powering up a print device or replacing a toner cartridge, a method comprising:

seeding a toner report level;

5 averaging a group of toner level sensor readings to produce a group average;

if the group average is less than the report level, setting the report level to the group average;

10 averaging a subsequent group of toner level sensor readings to produce a subsequent group average, each reading being within a prescribed percent of the report level; and

if the subsequent group average is less than the report level, setting the report level to the subsequent group average.

15 2. A method as recited in claim 1, wherein seeding a toner report level further comprises:

receiving toner level sensor readings and selecting the highest reading as the toner report level.

20 3. A method as recited in claim 1, further comprising:

continually repeating the recited actions of:

averaging a subsequent group of toner level sensor readings to produce a subsequent average, each reading being within a prescribed percent of the report level; and

25 if the subsequent group average is less than the report level, setting the report level to the subsequent group average.

4. A method as recited in claim 1, further comprising:  
prior to seeding the toner report level, setting the report level to an arbitrary value.

5 5. A method as recited in claim 1, wherein averaging further comprises:  
receiving toner level sensor readings that are pushed from the toner level sensor each time a change occurs in the sensed reading.

6. A method as recited in claim 1, wherein averaging further comprises:  
receiving toner level sensor readings that are pulled from the toner level sensor at a preset interval.

7. A method as recited in claim 6, wherein the preset interval is a temporal interval.

8. A method as recited in claim 6, wherein the preset interval is an event based interval.

9. A method as recited in claim 1, further comprising:  
reporting the report level upon request.

10. A method as recited in claim 1, further comprising:  
reporting the report level automatically upon a preset interval.

11. A print device, having computer-readable media with computer-readable instructions for performing the method as recited in claim 1.

12. A computer, having computer-readable media with computer-readable instructions for performing the method as recited in claim 1.

13. A method comprising:

5 seeding a toner report level;

averaging a group of toner level sensor readings to produce a group average;

if the group average is less than the report level, setting the report level to the group average;

10 averaging a subsequent group of toner level sensor readings to produce a subsequent group average; and

if the subsequent group average is less than the report level, setting the report level to the subsequent group average.

15 14. A method as recited in claim 13, wherein each toner level sensor reading in the subsequent group of toner level sensor readings is within a prescribed percent of the report level.

20 15. A method as recited in claim 13, wherein seeding a toner report level further comprises:  
receiving toner level sensor readings and selecting the highest reading as the toner report level.

16. A method as recited in claim 13, further comprising:

25 continually repeating the recited actions of:

averaging a subsequent group of toner level sensor readings to produce a subsequent average; and

if the subsequent group average is less than the report level, setting the report level to the subsequent group average.

17. A method as recited in claim 13, further comprising:

5 prior to seeding the toner report level, setting the report level to an arbitrary value.

18. A print device, having computer-readable media with computer-readable instructions for performing the method as recited in claim 13.

19. A computer, having computer-readable media with computer-readable instructions for performing the method as recited in claim 13.

20. A method comprising:

receiving N readings from a toner level sensor;

setting a report value to the highest of the N readings;

receiving M readings from the toner level sensor;

calculating an M reading average;

if the M reading average is less than the report value, setting the report

20 value to the M reading average;

receiving Q readings from the toner level sensor, wherein each of the readings is within a prescribed percent of the report value;

calculating a Q reading average; and

if the Q reading average is less than the report value, setting the report

25 value to the Q reading average.

21. A method as recited in claim 20, further comprising:

continually repeating the recited actions of:

receiving Q readings from the toner level sensor, wherein each of  
the readings is within a prescribed percent of the report value;

5 calculating a Q reading average; and

if the Q reading average is less than the report value, setting the  
report value to the Q reading average.

22. A method as recited in claim 20, further comprising:

10 setting the report value to an arbitrary number upon powering up a printer  
or replacing a toner cartridge.

23. A method as recited in claim 20, wherein receiving readings further  
comprises:

15 pushing sensed values from the toner level sensor each time a change  
occurs in the sensed value.

24. A method as recited in claim 20, wherein receiving readings further  
comprises:

20 pulling sensed values from the toner level sensor at a preset interval.

25. A method as recited in claim 24, wherein the preset interval is a temporal  
interval.

26. A method as recited in claim 24, wherein the preset interval is an event  
based interval.

27. A method as recited in claim 20, further comprising:  
reporting the report value upon request.

28. A method as recited in claim 20, further comprising:  
reporting the report value automatically at a preset interval.

29. A method as recited in claim 28, wherein the preset interval is a temporal  
interval.

30. A method as recited in claim 28, wherein the preset interval is an event  
based interval.

31. A method as recited in claim 20, wherein the prescribed percent is 10  
percent.

32. A method as recited in claim 20, wherein N, M and Q each equals 8.

33. A method as recited in claim 20, wherein toner is any marking agent  
stored in a cartridge for use in a print device.

34. A print device, having computer-readable media with computer-readable  
instructions for performing the method as recited in claim 20.

35. A computer, having computer-readable media with computer-readable  
instructions for performing the method as recited in claim 20.

36. A printer comprising:

a consumable marking agent;

a sensor to sense the amount of marking agent;

a printer controller configured to seed a report level of the marking agent;

5 the printer controller further configured to receive and average a group of readings from the sensor and, if the group average is less than the report level, to set the report level to the group average;

the printer controller further configured to receive and average a subsequent group of readings from the sensor, each reading of the subsequent group of readings being within a prescribed percent of the report level, and, if the subsequent group average is less than the report level, to set the report level to the subsequent group average.

37. A printer as recited in claim 36, wherein the printer controller is further configured to continually receive and average subsequent groups of readings from the sensor, each reading of the subsequent groups of readings being within a prescribed percent of the report level, and, if any subsequent group average is less than the report level, to set the report level to that subsequent group average.

20 38. A printer as recited in claim 36, wherein seeding a report level of the marking agent further comprises:

receiving readings from the sensor and selecting the highest reading as the report level.

25 39. A computer coupled to a print device, the print device comprising a consumable marking agent and a sensor to sense the amount of marking agent, the computer comprising:

a printer controller configured to seed a report level of the marking agent;

the printer controller further configured to receive and average a group of readings from the sensor and, if the group average is less than the report level, to set the report level to the group average;

5 the printer controller further configured to receive and average a subsequent group of readings from the sensor, each reading of the subsequent group of readings being within a prescribed percent of the report level, and, if the subsequent group average is less than the report level, to set the report level to the subsequent group average.

40. A computer as recited in claim 39, wherein the printer controller is further configured to continually receive and average subsequent groups of readings from the sensor, each reading of the subsequent groups of readings being within a prescribed percent of the report level, and, if any subsequent group average is less than the report level, to set the report level to that subsequent group average.

41. A computer as recited in claim 39, wherein seeding a report level of the marking agent further comprises:

20 receiving readings from the sensor and selecting the highest reading as the report level.

42. A system comprising:

a sensor configured to sense the amount of a marking agent;

a printer controller configured to seed a report level of the marking agent;

25 the printer controller further configured to successively receive and average groups of readings from the sensor, and if the average of any group of readings is less than the report level, to set the report level to that average.



43. A system as recited in claim 42, wherein every group of readings except for the first group of readings is made up of readings which are all within a prescribed percent of the current report level.